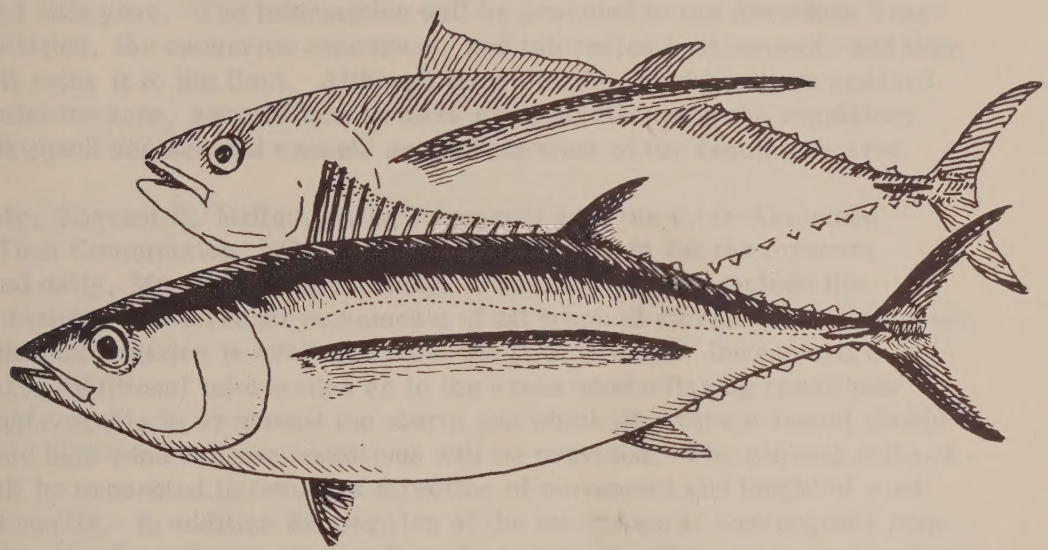
FISHING INFORMATION

JUNE 1970



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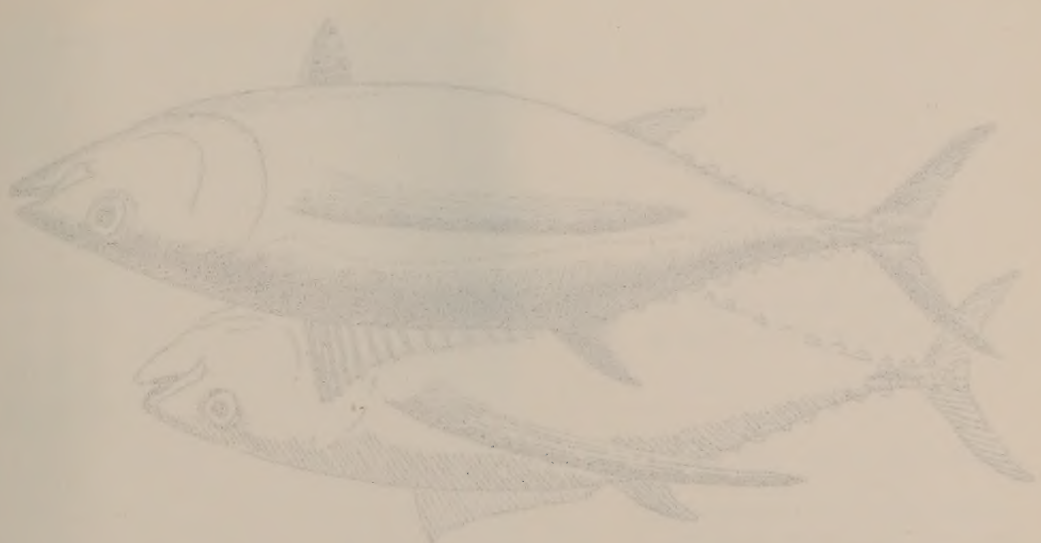
UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF COMMERCIAL FISHERIES
FISHERY-OCEANOGRAPHY CENTER
LA JOLLA, CALIFORNIA

U.S. DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF COMMERCIAL FISHERIES
FISHERY-OCEANOGRAPHY CENTER
LA JOLLA, CALIFORNIA



FISHING INFORMATION

JUNE 1970

BCF ADVISORY SERVICES EXTENDED TO TROPICAL TUNA FLEET

The Bureau of Commercial Fisheries Fishery-Oceanography Center at La Jolla, California, is extending its advisory services to include weather information for the American tuna fleet in the tropical Pacific from about July 13 to November 1 this year. The information will be provided to the American Tunaboat Association, the canneries concerned, and interested boat owners, and they in turn will relay it to the fleet. Although the yellowfin quota has been reached in the regulatory area, several tuna seiners are still fishing in the regulatory area for skipjack and several vessels are fishing west of the regulatory area.

Mr. Forrest R. Miller, on BCF contract with the Inter-American Tropical Tuna Commission, will prepare the weather data for the forecast to be issued daily, Monday through Friday. The advisory will include the location, intensity and forecast movements of all tropical storms and hurricanes. Although this information is available from the U. S. Weather Bureau and U. S. Coast Guard, additional information as to the areas where fishing conditions would be unfavorable in or around the storm and which direction a vessel should sail to avoid high wind and sea conditions will be provided. The general state of the sea will be presented in terms of direction of movement and height of wind waves and swells. In addition the position of the intertropical convergence zone and the intensity of weather (rain squalls, etc.) along it will be given as required. Average sea surface temperatures over specified areas and general weather conditions expected over specified areas in terms of clear, cloudy, or rain squalls will also be given.

A 48-hour weekend advisory forecast will be issued each Friday, but when a tropical storm or hurricane is passing through the fishing grounds, special weather advisories will be issued on Saturday and Sunday. Since weather, wind, and sea conditions are not uniform throughout the eastern tropical Pacific, the geographical region, which is from 30° N to 5° S and westward to the coasts to 140° W, has been divided into seven areas. Each area will usually have uniform meteorological conditions during any 1 or 2 day period. Four of the areas cover the yellowfin regulatory area, while three of these extend westward outside the regulatory area.

R. Michael Laurs
Leader, Fishery-Oceanography Group

SEA SURFACE TEMPERATURE CHARTS, EASTERN PACIFIC OCEAN
JUNE 1970

Acknowledgements

The following organizations and stations contributed data for the June 1970 charts:

U.S. Bureau of Commercial Fisheries Biological Laboratories La Jolla, California, Honolulu, Hawaii, and Seattle, Washington
U.S. Coast Guard Cutter ACUSHNET
U.S. Naval Weather Service, Fleet Numerical Weather Central, Monterey, California
Environmental Science Services Administration
U.S. Weather Bureau, San Diego, California
U.S. Coast and Geodetic Survey, Pacific Marine Center, Seattle, Washington
General Dynamics Convair Division; Ocean Data Buoy ALPHA
Hopkins Marine Station, Pacific Grove, California, J. P. Balesteri
Instituto Hidrografico de la Armada, Valparaiso, Chile
Inter-American Geodetic Survey by L. Peren at Puerto Armuelles, Panama; D. Chavez at Talara, Peru;
Kelco Company, San Diego, California
LMR Inc., San Diego, California
Oregon State University, Department of Oceanography, Corvallis, Oregon
Pacific Missile Range, Range Operations Department, Geophysics Division, Point Mugu, California
Pacific Oceanographic Group, Nanaimo, British Columbia, by H. J. Hollister from observations by G. C. Wilks at Langara Island Light; M. A. Fisher at Cape St. James Light; Lily Collins at Kains Island Lightstation; O. A. Edwards at Amphitrite Point Light
Scripps Institution of Oceanography, La Jolla, California, by Margaret Robinson
Scripps Institution of Oceanography Research Vessels ALEXANDER AGASSIZ, THOMAS WASHINGTON, ELLEN B. SCRIPPS, OCONOSTOTA, FLIP, MELVILLE
University of Washington, Seattle, Washington; R/V THOMAS THOMPSON
Fishing Vessels ANNE M, CONNIE JEAN

Charts

Figure 1.--Mean sea surface temperature (° F). Squares show temperatures at weather ship stations. Numerals on shore are temperatures at coastal and lightship stations.

Figure 2.--Deviation of sea surface temperatures (° F) from long term charts of H. O. 225. Hatched areas are colder in 1970.

Figure 3.--Deviation of sea surface temperatures (° F) from those of June 1969. Hatched areas are colder in 1970.

Figure 4.--Mean sea surface temperature (° F). Numerals on shore are temperatures at coastal stations.

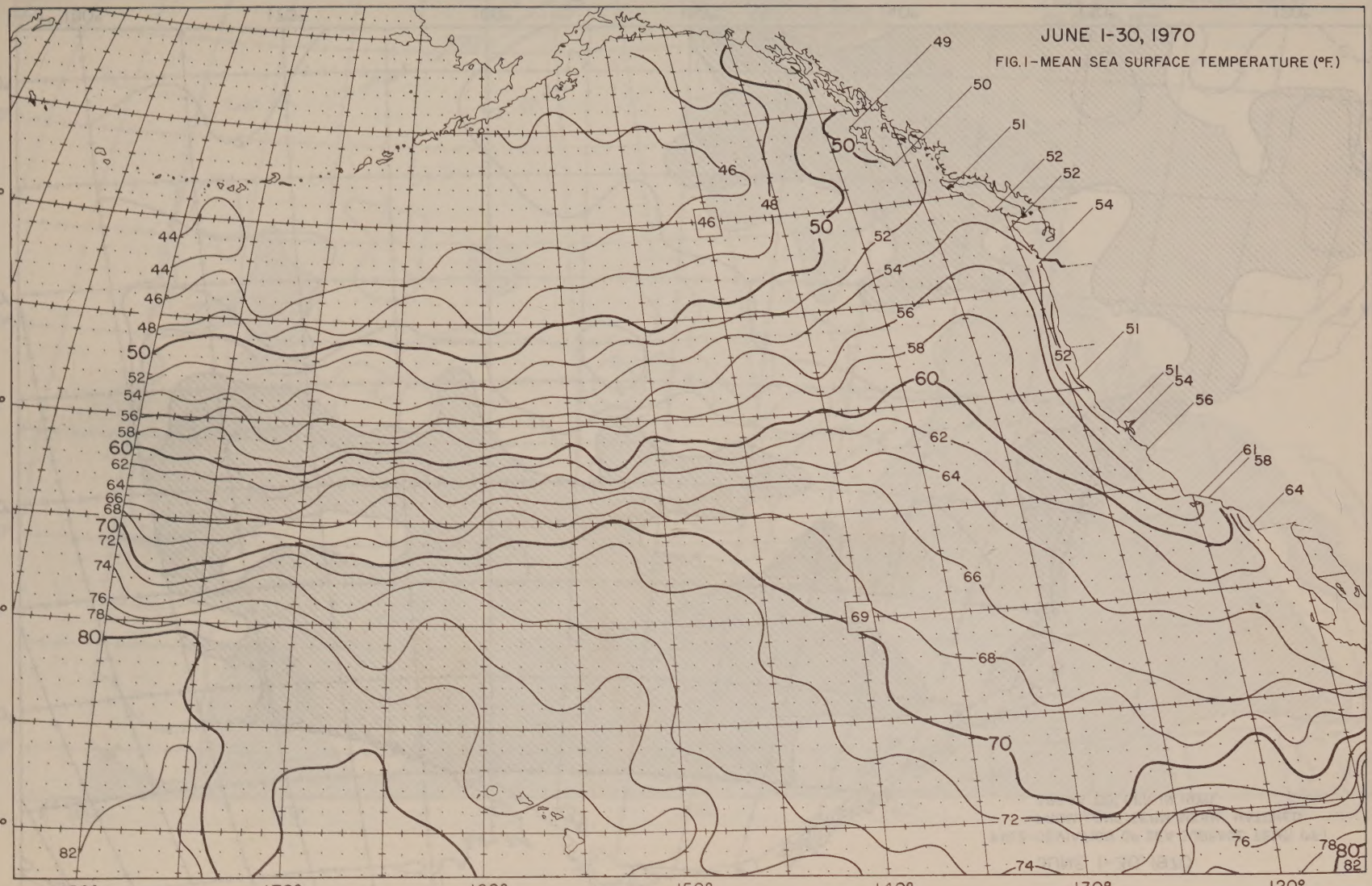
Figure 5.--Deviation of sea surface temperatures (° F) from long term charts of H. O. 225 and NAVOCEANO sp-123. Shaded areas are colder in 1970.

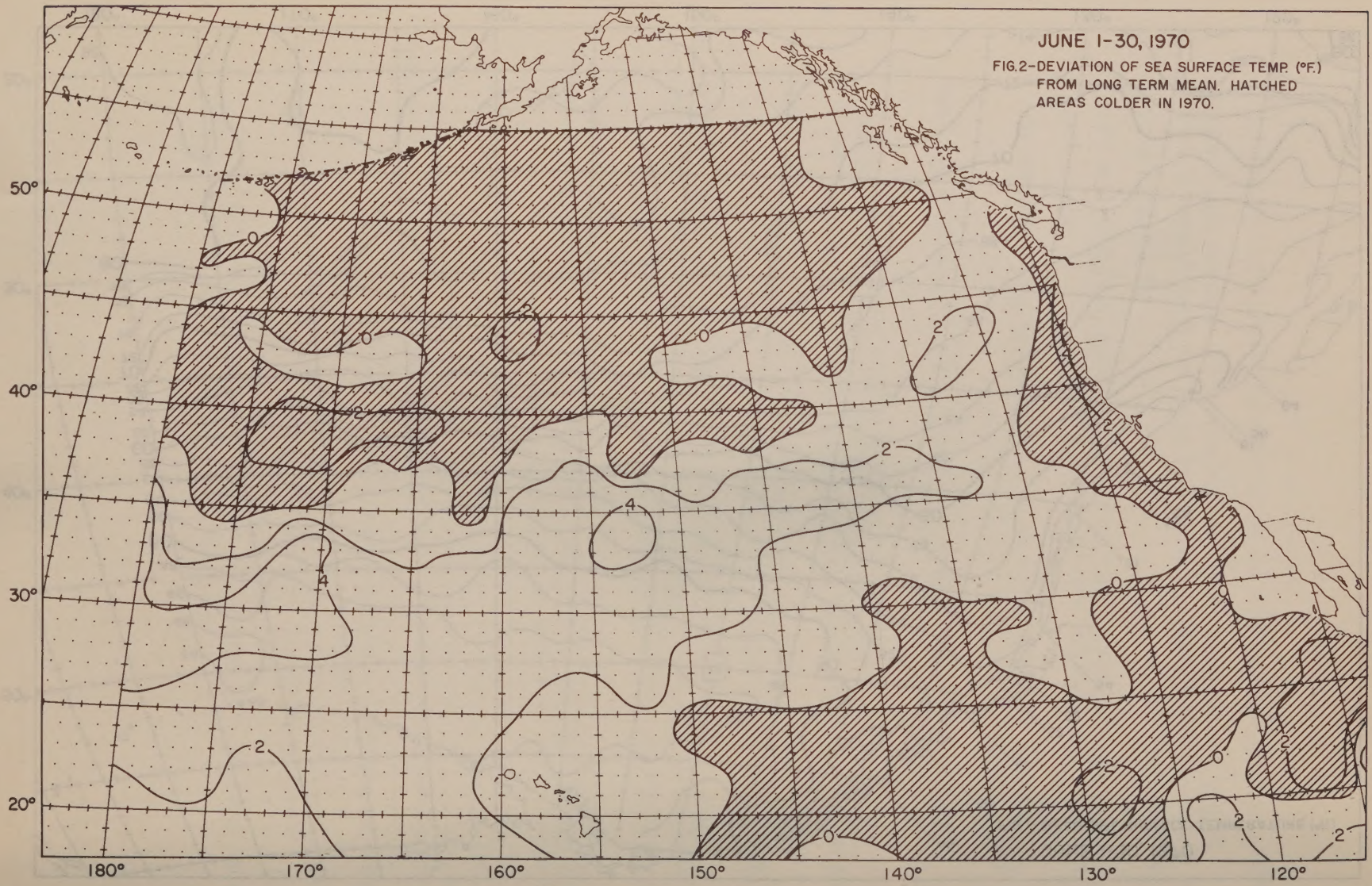
Figure 6.--Deviation of sea surface temperatures (° F) from those of June 1969. Shaded areas are colder in 1970.

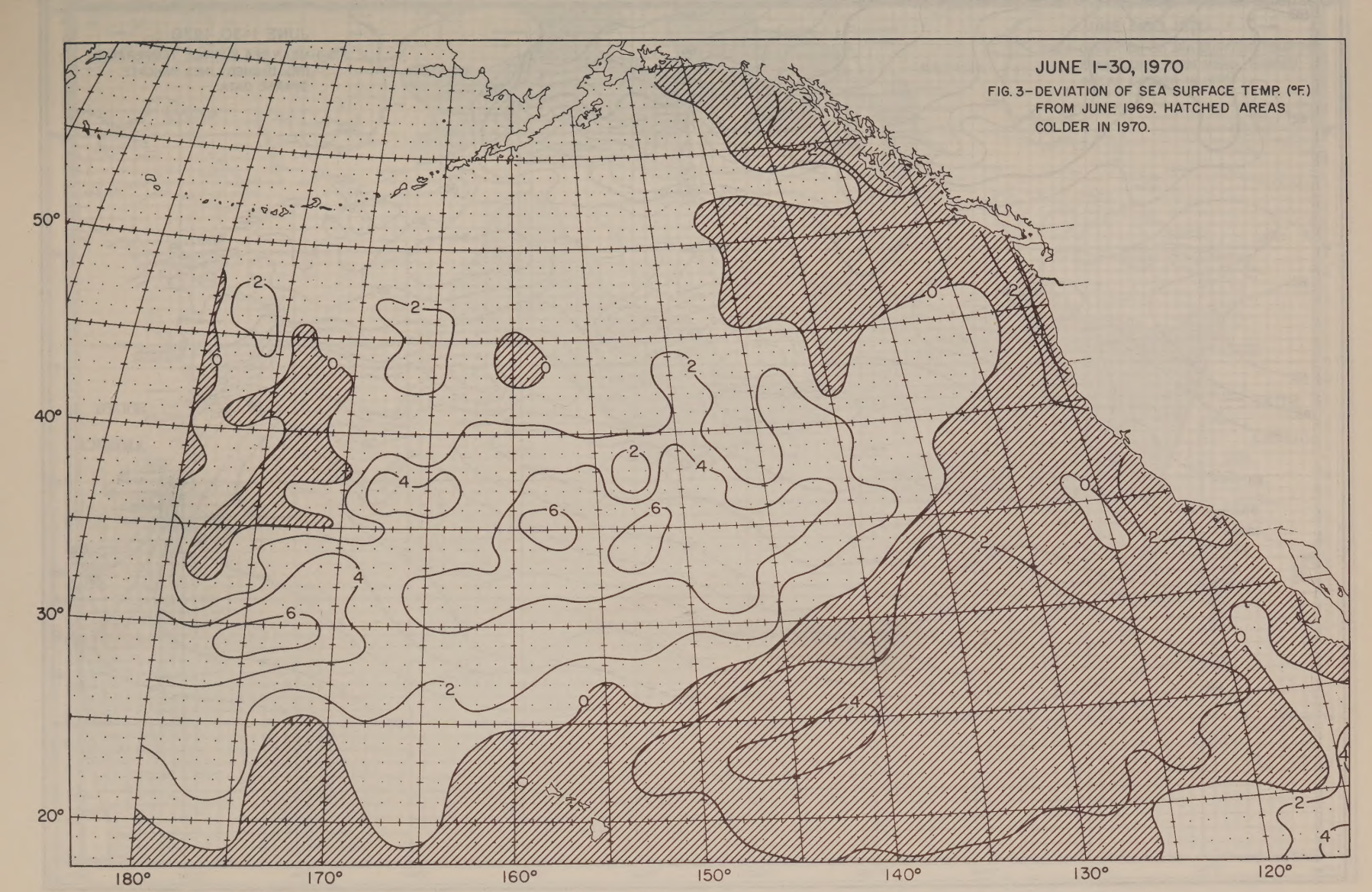
Figure 7.--10-year mean (1961-1970) observed sea level values of barometric pressure (millibars), resultant wind direction (degrees true), resultant wind speed (knots), and average wind speed (knots) regardless of direction.

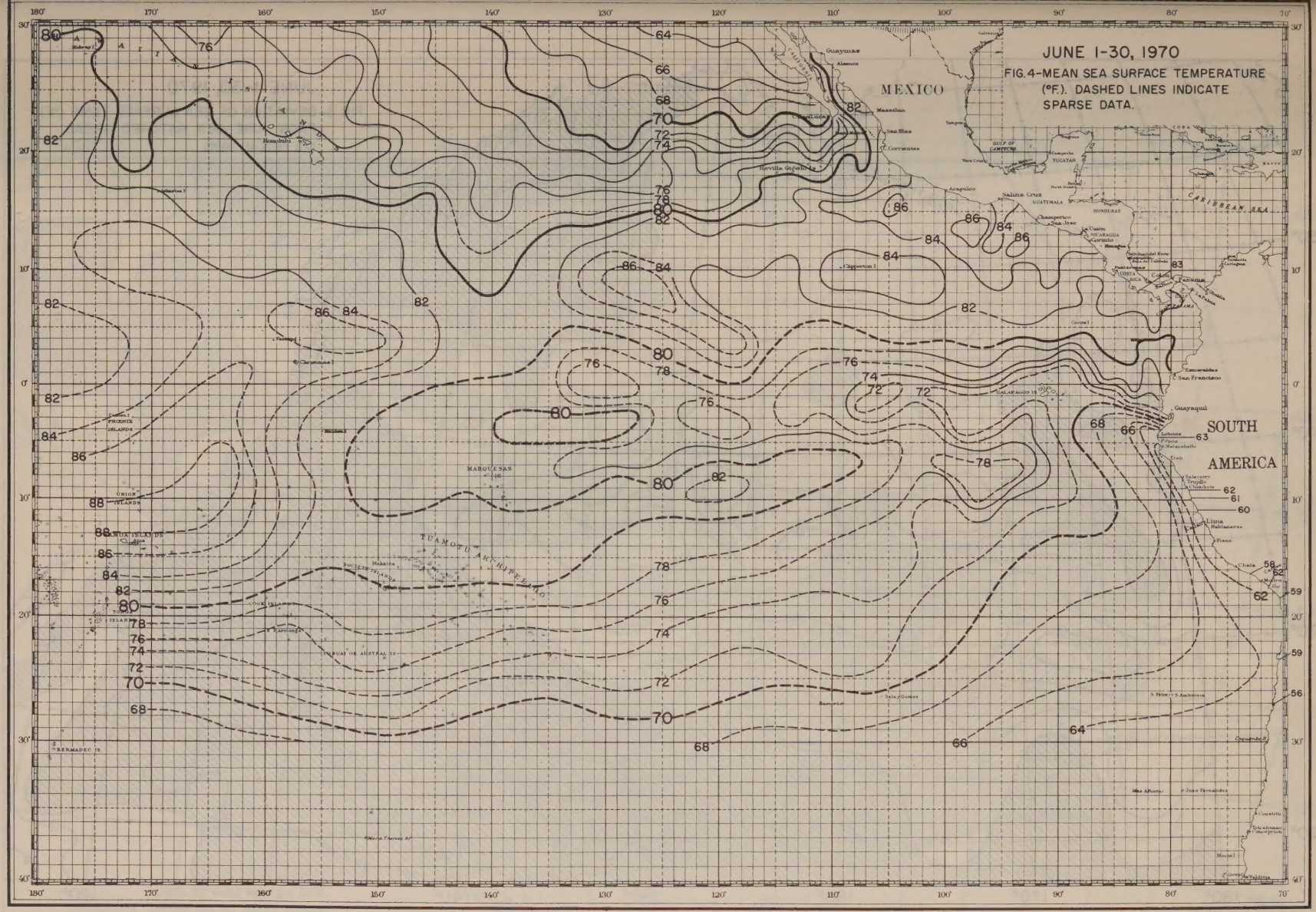
Figure 8.--Observed sea level values of barometric pressure (millibars), resultant wind direction (degrees true), resultant wind speed (knots), and average wind speed (knots) regardless of direction.

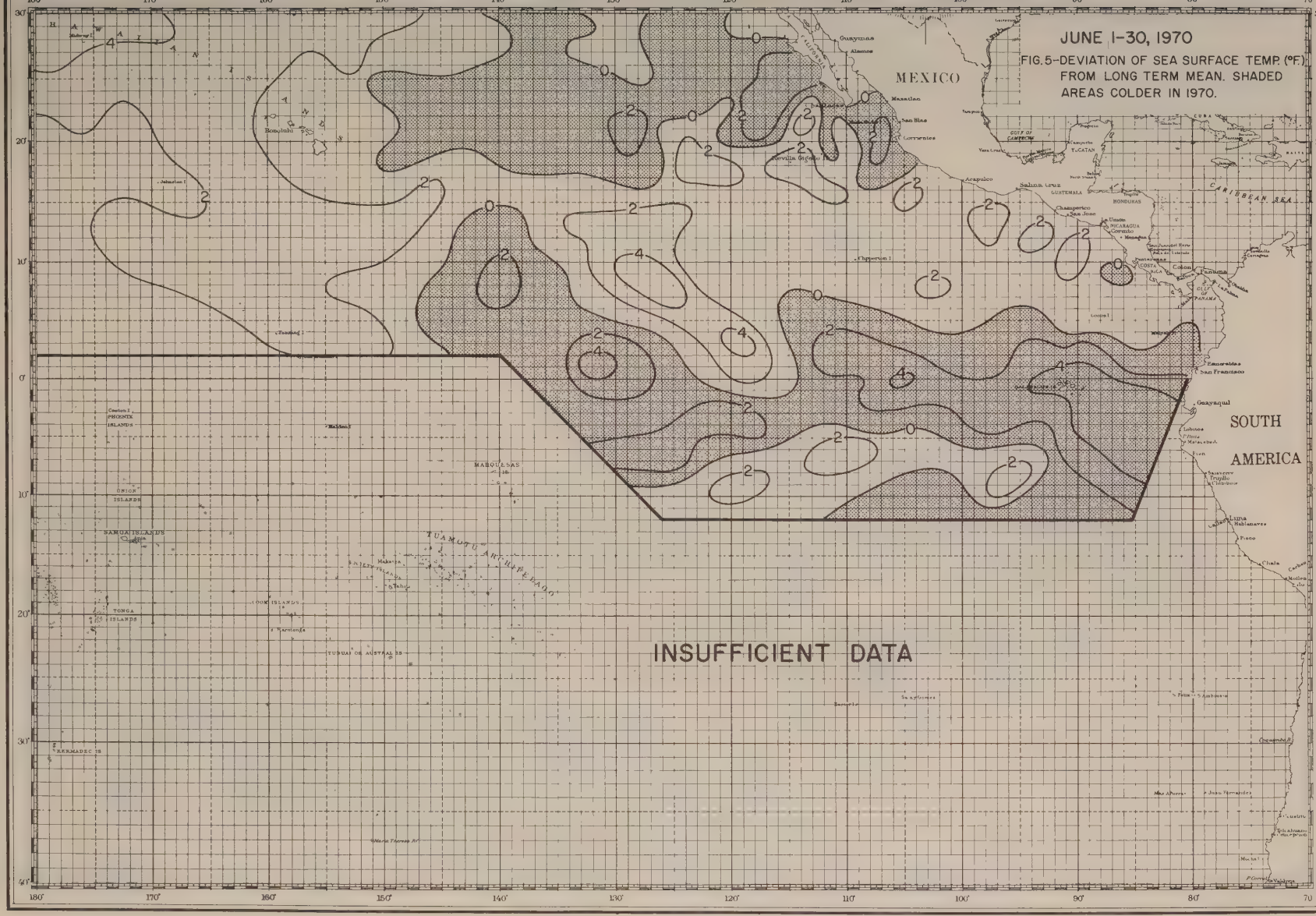
James A. Renner, Fishery Biologist
Kenneth S. Raymond, Scientific Illustrator
July 10, 1970

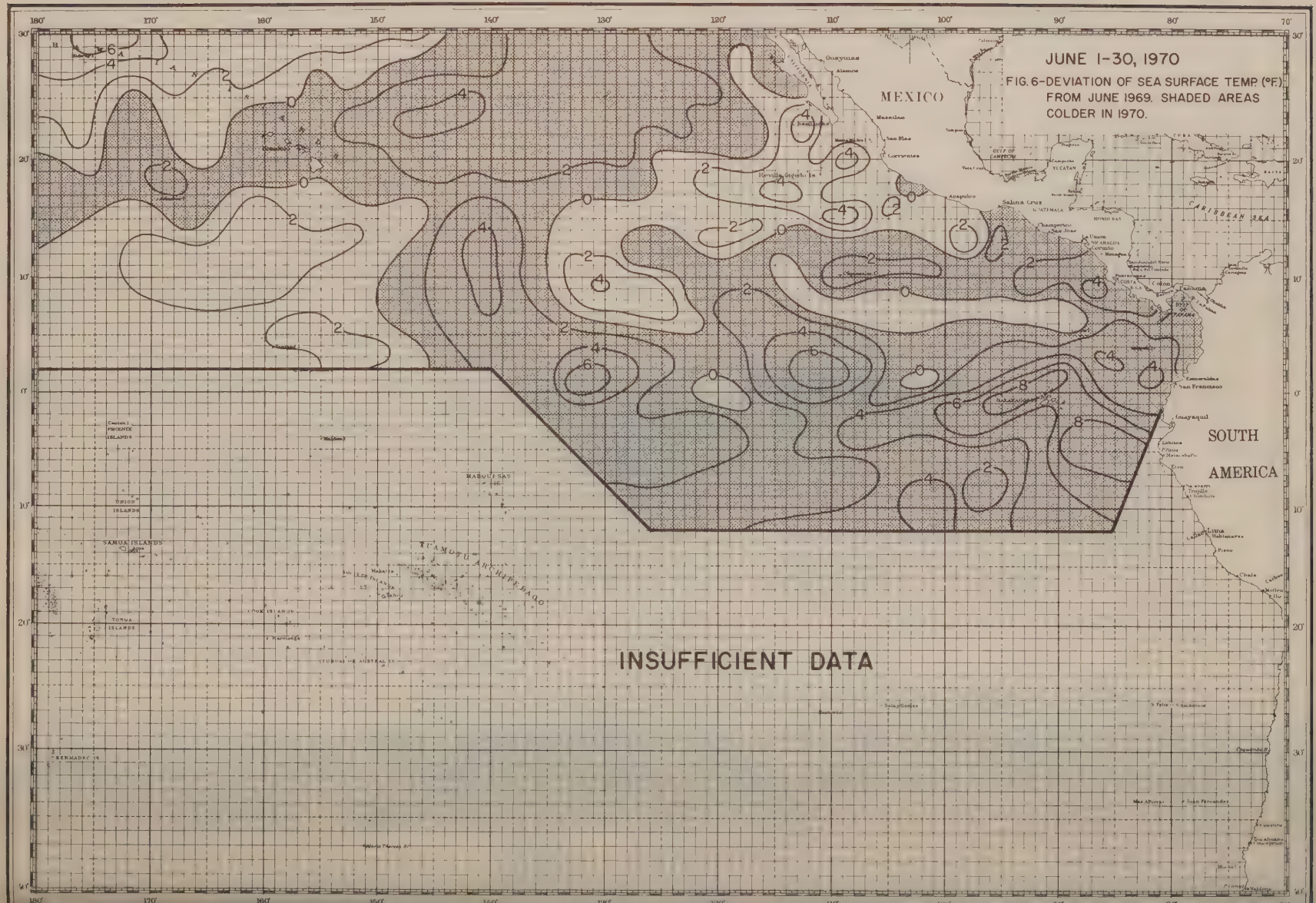

JUNE 1-30, 1970
FIG. 1-MEAN SEA SURFACE TEMPERATURE (°F.)
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°
46
69

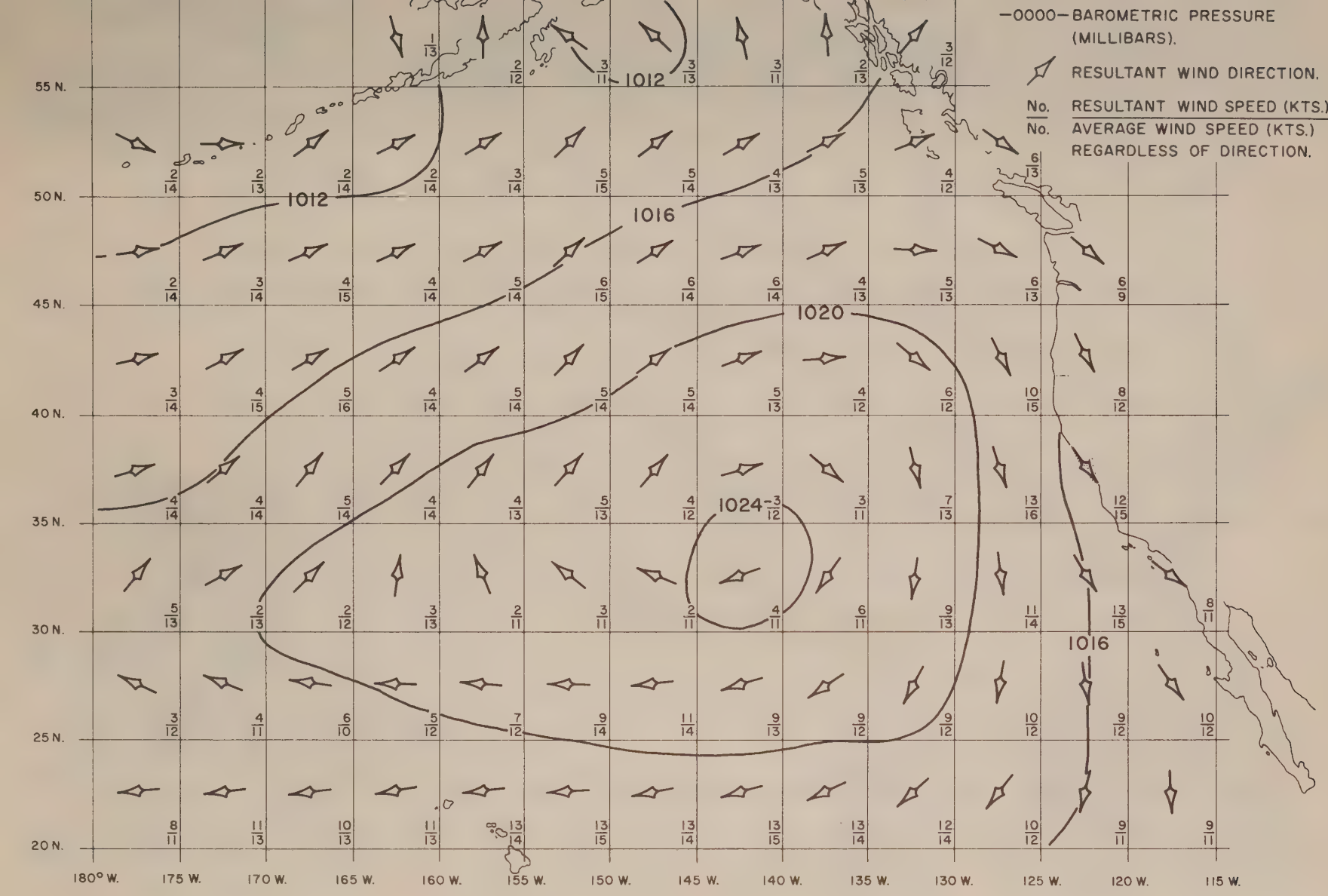

JUNE 1-30, 1970
FIG.2-DEVIATION OF SEA SURFACE TEMP. (°F.) FROM LONG TERM MEAN. HATCHED AREAS COLDER IN 1970.
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°
0
2
4


JUNE 1-30, 1970
FIG. 3-DEVIATION OF SEA SURFACE TEMP. (°F.) FROM JUNE 1969. HATCHED AREAS COLDER IN 1970.
50°
40°
30°
20°
180°
170°
160°
150°
140°
130°
120°


JUNE 1-30, 1970
FIG. 4-MEAN SEA SURFACE TEMPERATURE (°F). DASHED LINES INDICATE SPARSE DATA.
MEXICO
SOUTH AMERICA
CARIBBEAN SEA
GULF OF CAMPECHE
HONDURAS
GUATEMALA
COSTA RICA
NICARAGUA
PANAMA
COLOMBIA
ECUADOR
PERU
GALAPAGOS IS.
MARQUESAS
TUAMOTU ARCHIPELAGO
SOCIETY ISLANDS
COOK ISLANDS
TONGA ISLANDS
UNION ISLANDS
PHOENIX ISLANDS
BERMADEC IS
Guaymas
Mazatlan
San Blas
Corrientes
Acapulco
Salina Cruz
Champerico
San Jose
Corinto
Guayaquil
San Francisco
Lobitos
Talara
Salaverry
Trujillo
Chimbote
Lima
Callao
Pisco
Chala
Arica
Iquique
Mollendo
Valdivia
Easter I
Juan Fernandez
Mas A Fuera
S. Felix
S. Ambrosio
Hawaiian Is
Honolulu
Johnston I
Palmyra I
Christmas I
Canton I
Fanning I
Jarvis I
Baker I
Howland I
Gardner I
Clipperton I
Revilla Gigedo Is
Tahiti
Makatea
Tubuai or Austral Is
Rapa I
Pitcairn I
Samoa
Tokelau Is
Ellice Is
Gilbert Is
Marshall Is
Wake I
Marcus I
Bonin Is
Volcano Is
Ryukyu Is
Taiwan
Luzon
Guam
Caroline Is
Palau Is
Mariana Is
Truk
Ponape
Yap
Marcus I
Maria Theresa Rf
Nukuoro I
Kapingamarangi I
Ocean I
Nauru I
Banaba I
Tarawa
Makin I
Apamama I
Jaluit I
Kwajalein I
Eniwetok
Bikini
Rongelap I
Utirik I
Wotje I
Mili I
Ailinglapalap I
Majuro I
Arno I
Maloelap I
Mejit I
Aur I
Ujae I
Lae I
Wotho I
Ujelang I
Enderbury I
Phoenix Is
Malden I
Starbuck I
Flint I
Vostok I
Caroline I
Penrhyn I
Manihiki I
Rakahanga I
Pukapuka I
Nassau I
Suwarrow I
Rarotonga
Aitutaki
Manuae
Mitiaro
Atiu
Mauke
Niue I
Tongatabu
Eua I
Ha'apai Is
Vavau Is
Fiji Is
Rotuma I
Wallis I
Futuna I
Alofi I
Uvea I
Rotoava
Faaite
Kauehi
Aratika
Fakarava
Kaukura
Arutua
Apataki
Makemo
Hao
Amanu
Tatakoto
Hereheretue
Mangareva
Pitcairn I
Henderson I
Ducie I
Oeno I
Easter I
Sala y Gomez
Nazca
Juan Fernandez
Mas A Fuera
S. Felix
S. Ambrosio
Desventuradas Is
Mocha I
Valdivia
Corral
Constitucion
Concepcion
Talcahuano
Arauco
Lebu
Isla Mocha
Isla Santa Maria
Coronel
Lota
Isla Quiriquina
Talcahuano
Concepcion
Tome
Penco
Lirquen
Cocholgue


JUNE 1-30, 1970
FIG. 5-DEVIATION OF SEA SURFACE TEMP. (°F.) FROM LONG TERM MEAN. SHADED AREAS COLDER IN 1970.
MEXICO
SOUTH AMERICA
INSUFFICIENT DATA


JUNE 1-30, 1970
FIG. 6-DEVIATION OF SEA SURFACE TEMP. (°F.) FROM JUNE 1969. SHADED AREAS COLDER IN 1970.
INSUFFICIENT DATA
MEXICO
SOUTH AMERICA
CARIBBEAN SEA
TUAMOTU ARCHIPELAGO
MARQUESAS
SAMOA ISLANDS
TONGA ISLANDS
BERMUDA IS.
Guayaquil
Lima
Acapulco
Salina Cruz
San Francisco
180°
170°
160°
150°
140°
130°
120°
110°
100°
90°
80°
70°
30°
20°
10°
0°
10°
20°
30°


—0000— BAROMETRIC PRESSURE (MILLIBARS).
RESULTANT WIND DIRECTION.
No. RESULTANT WIND SPEED (KTS.).
No. AVERAGE WIND SPEED (KTS.) REGARDLESS OF DIRECTION.
1012
1012
1016
1020
1024
1016
55 N.
50 N.
45 N.
40 N.
35 N.
30 N.
25 N.
20 N.
180° W.
175 W.
170 W.
165 W.
160 W.
155 W.
150 W.
145 W.
140 W.
135 W.
130 W.
125 W.
120 W.
115 W.

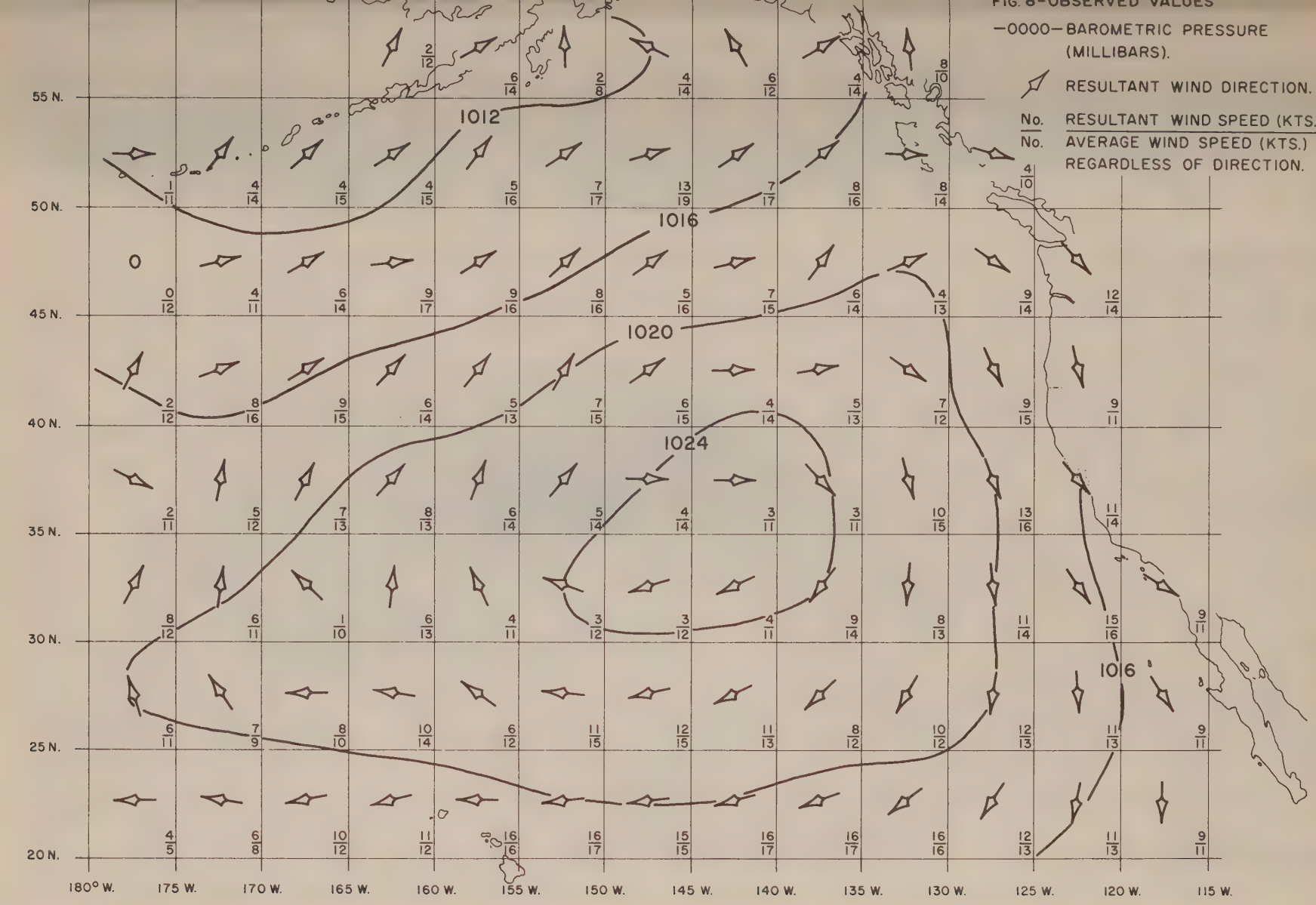
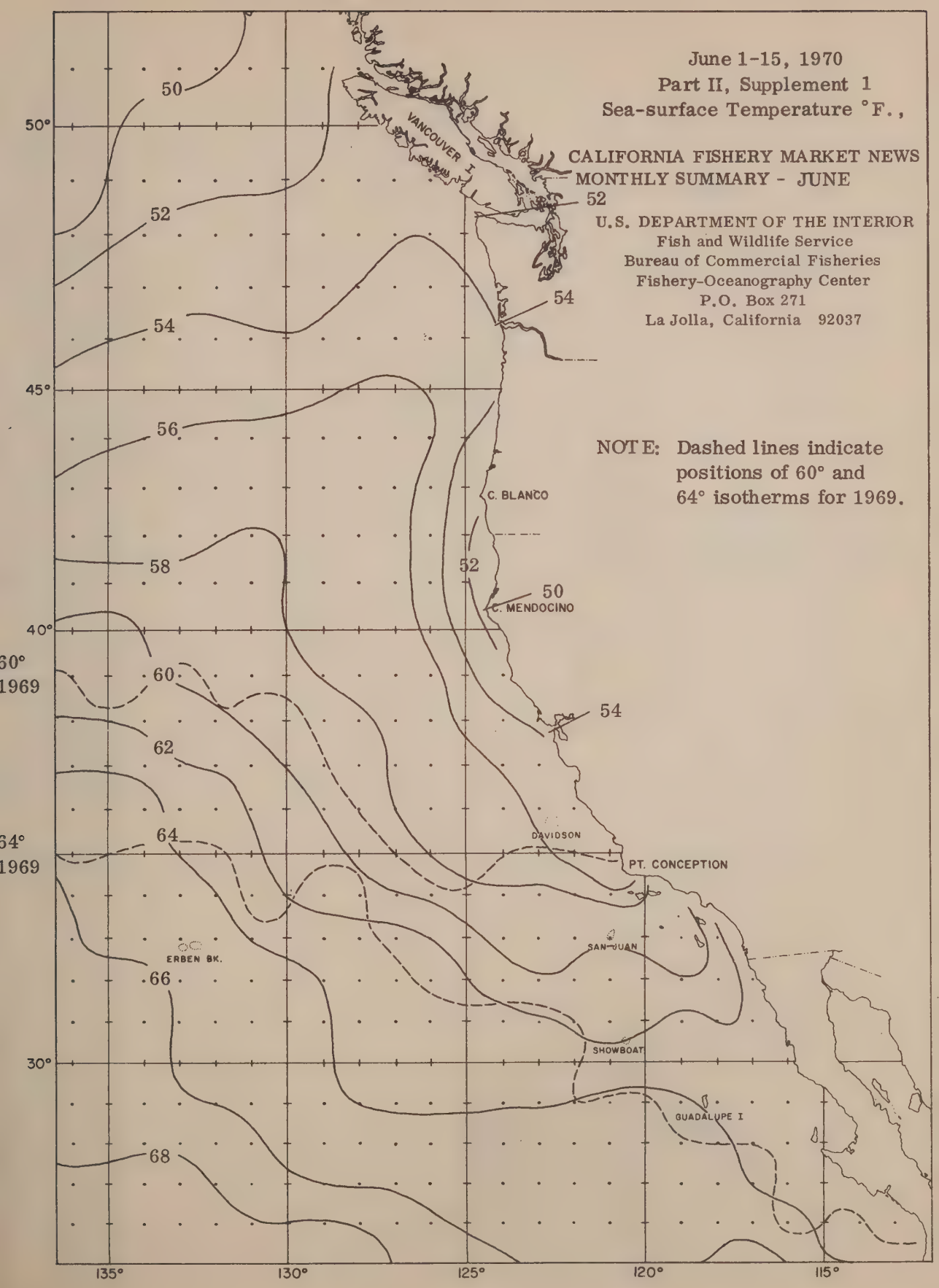
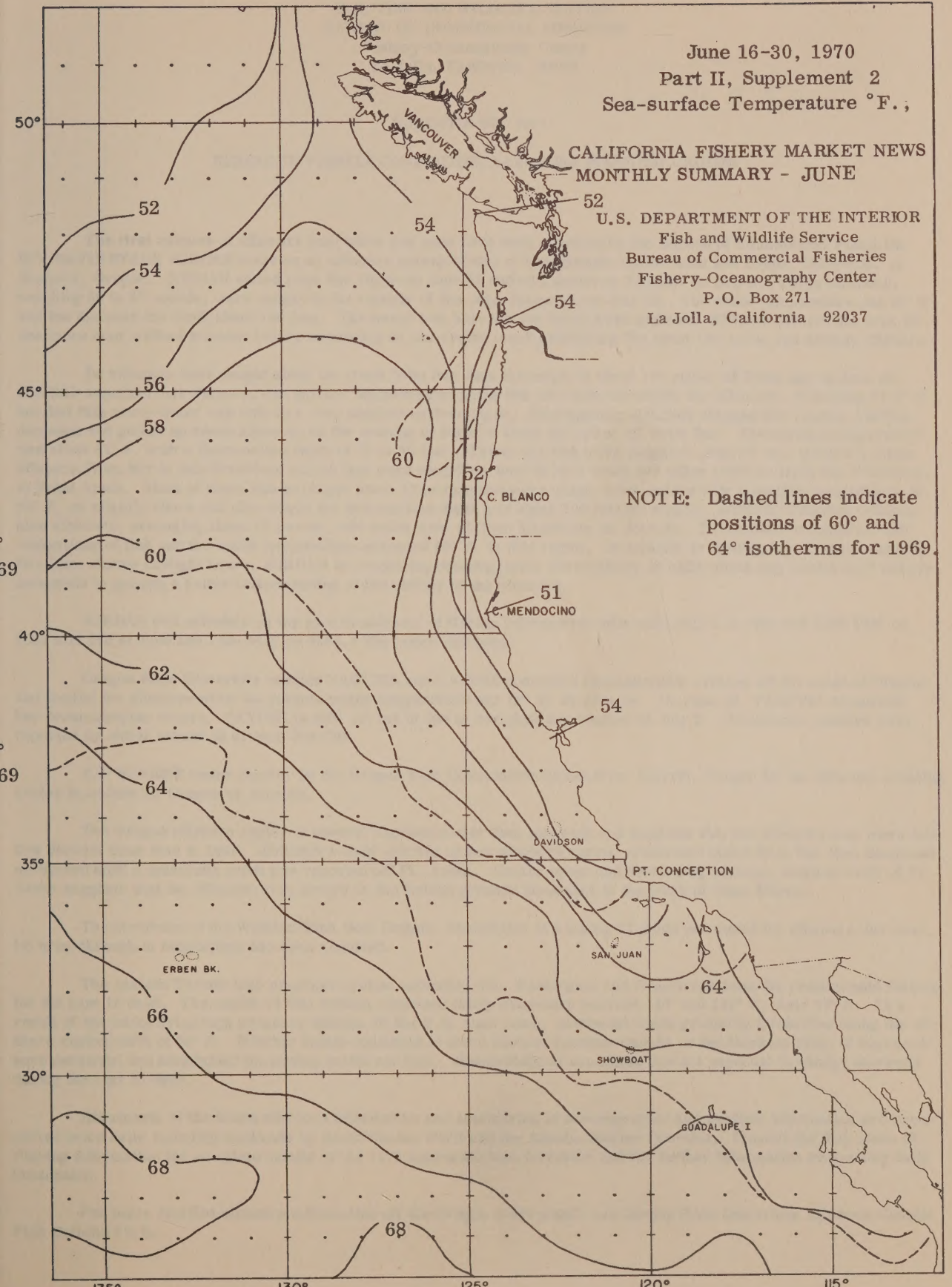


FIG. 8-OBSERVED VALUES
—0000— BAROMETRIC PRESSURE (MILLIBARS).
RESULTANT WIND DIRECTION.
No. RESULTANT WIND SPEED (KTS.).
No. AVERAGE WIND SPEED (KTS.) REGARDLESS OF DIRECTION.
1012
1016
1020
1024
1016
0
55 N.
50 N.
45 N.
40 N.
35 N.
30 N.
25 N.
20 N.
180° W.
175 W.
170 W.
165 W.
160 W.
155 W.
150 W.
145 W.
140 W.
135 W.
130 W.
125 W.
120 W.
115 W.


June 1-15, 1970
Part II, Supplement 1
Sea-surface Temperature °F.,
CALIFORNIA FISHERY MARKET NEWS
MONTHLY SUMMARY - JUNE
U.S. DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service
Bureau of Commercial Fisheries
Fishery-Oceanography Center
P.O. Box 271
La Jolla, California 92037
NOTE: Dashed lines indicate positions of 60° and 64° isotherms for 1969.
50°
45°
40°
60° 1969
64° 1969
30°
135°
130°
125°
120°
115°
50
52
54
56
58
60
62
64
66
68
VANCOUVER I.
C. BLANCO
C. MENDOCINO
DAVIDSON
PT. CONCEPTION
SAN JUAN
SHOWBOAT
GUADALUPE I
ERBEN BK.


June 16-30, 1970
Part II, Supplement 2
Sea-surface Temperature °F.,
CALIFORNIA FISHERY MARKET NEWS
MONTHLY SUMMARY - JUNE
U.S. DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service
Bureau of Commercial Fisheries
Fishery-Oceanography Center
P.O. Box 271
La Jolla, California 92037
NOTE: Dashed lines indicate positions of 60° and 64° isotherms for 1969.
VANCOUVER I.
C. BLANCO
C. MENDOCINO
DAVIDSON
PT. CONCEPTION
SAN JUAN
SHOWBOAT
GUADALUPE I
ERBEN BK.
50°
45°
40°
35°
30°
135°
130°
125°
120°
115°
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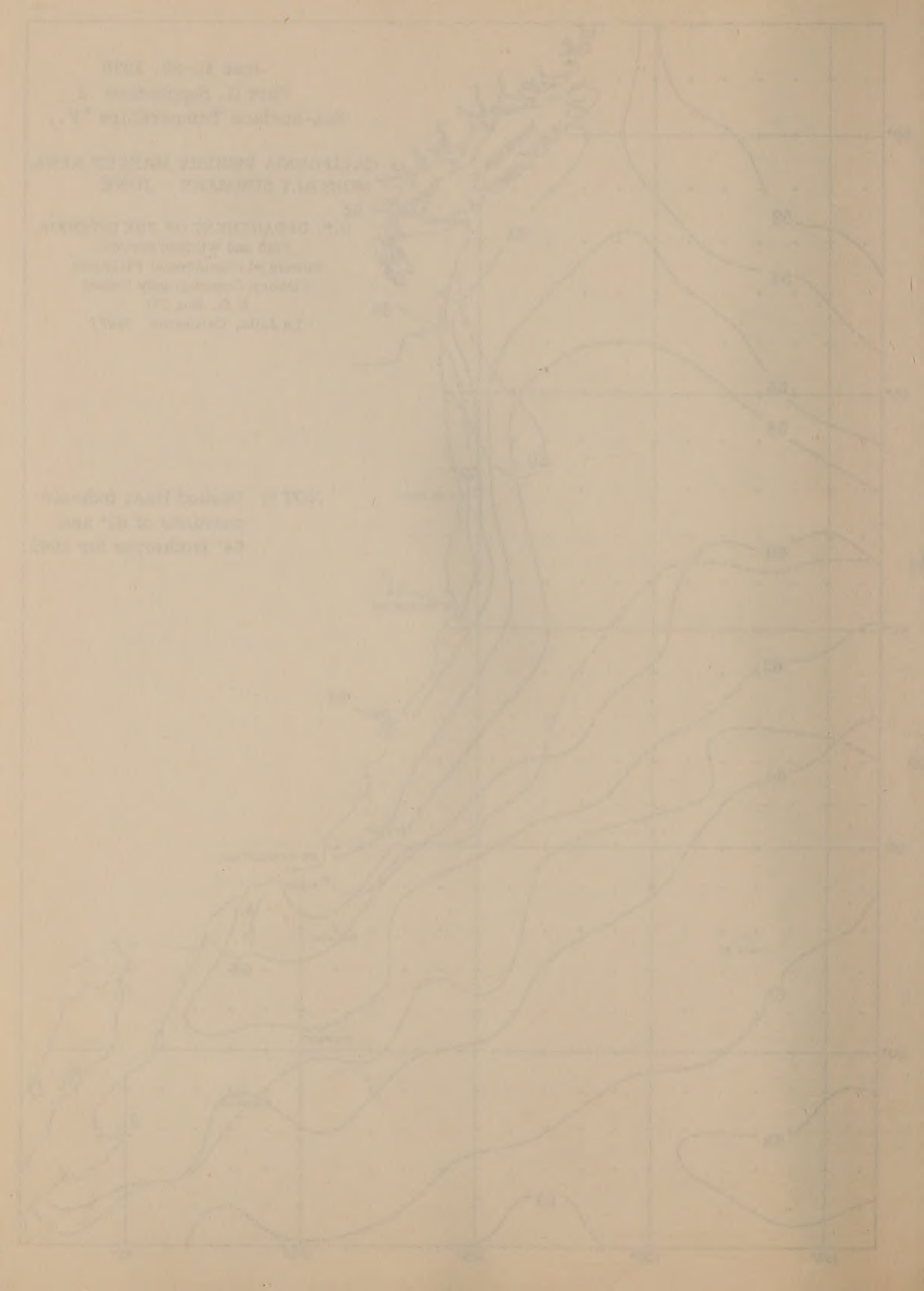
62
64
66
68



UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE
BUREAU OF COMMERCIAL FISHERIES
Fishery-Oceanography Center
La Jolla, California 92037

BULLETIN NO. 70-1

RESEARCH VESSELS CONDUCTING ALBACORE SCOUTING CRUISES

The first catches of albacore tuna taken this year have been reported by the Bureau of Commercial Fisheries R/V DAVID STARR JORDAN while on an albacore survey cruise of the offshore region from San Diego, California, to Newport, Oregon. JORDAN sailed from San Diego on June 22 and will arrive in Newport on July 3. Three albacore, weighing 20 to 27 pounds, were caught in the vicinity of San Juan Seamount on June 24. The water temperature was 60° F. and the thermocline depth about 150 feet. The water was blue and few birds were sighted. JORDAN circled the area for one more hour without success before continuing on her cruise track paralleling the coast 150 miles and further offshore.

No albacore were caught along the track from San Juan Seamount to about 170 miles off Point Sur on June 25. JORDAN reported that observed sea surface temperatures along this line were favorable for albacore, averaging 62.6° F., but that this warm water was only in a very shallow surface layer. Subsequently JORDAN changed her course, heading due west and picked up seven albacore on the evening of June 26 about 300 miles off Point Sur. The surface temperature was about 61° F. with a thermocline depth of 30 to 90 feet. Thirty-six fish were caught on June 27 on a track 300 miles offshore Point Sur to San Francisco and 45 fish were caught on June 28 on a track 300 miles offshore from San Francisco to Point Arena. Most of these fish averaged about 13 pounds and were caught from waters with a surface temperature of 60° F. or slightly above and also where the thermocline depth was about 100 feet or deeper. JORDAN reported catching nine albacore, averaging about 11 pounds, 300 miles west of Cape Mendocino on June 29. There were no apparent concentrations of fish and the water temperature averaged 59° F. in this region. In addition to trolling for albacore, usually five lines during daylight hours, JORDAN is conducting oceanographic observations at night which may assist BCF fishery scientists in gaining a better understanding of the biology of the albacore.

JORDAN will schedule on the spot broadcasts of fishing information daily until July 3 at 0630 and 1300 PDT on 2638 kHz and at 0700 and 1330 PDT on 8284.4 kHz upper sideband.

Oregon State University vessels YAQUINA and CAYUSE conducted oceanographic cruises off the coast of Oregon and trolled for albacore when the surface water temperature was 58° F. or greater. On June 30, YAQUINA completed her oceanographic cruise. CAYUSE is still out but is due to complete her studies on July 2. No albacore catches were reported by either vessel as of noon June 29.

F/V SUNRISE under charter by the Oregon Fish Commission sailed from Astoria, Oregon for an albacore scouting cruise in waters off Oregon on June 30.

The Oregon offshore region is several degrees cooler than last year and suggests that the albacore may move into this district later than in 1969. JORDAN's daily catches on her albacore survey cruise increased from San Juan Seamount northward until a maximum catch was reported off Pt. Arena. Cooler water and decreasing albacore catches north of Pt. Arena suggests that the albacore may arrive on the fishing grounds somewhat to the south of Cape Blanco.

The members of the Western Fish Boat Owners Association are asking 27 cents per pound for albacore this year. No breakthrough in negotations has been reported.

The eastern Pacific high pressure system extending into Washington and Oregon has been the predominant feature for the past 12 days. The center of this system remained fairly stationary between 140° and 150° W. near 37° N. As a result of the intensifying high pressure system off the U.S. west coast, northwest winds gradually intensified along the offshore region north of 30° N. Weather fronts continued to move eastward across Canada as the blocking ridge of high pressure persisted and maintained the strong northwest flow. Meteorological conditions are not expected to change markedly during the next 15 days.

Broadcasts of the latest albacore information and summaries of oceanographic and weather information are transmitted twice daily including weekends by Radio Station WWD and the Astoria Marine Operator. Consult the May issue of Fishing Information for complete details of the 1970 temperate tuna forecasts and for further information concerning daily broadcasts.

For more detailed albacore information off the Oregon coast please see Oregon State University Albacore Central Fish Bulletin 70-B.

June 30, 1970

R. Michael Laurs